

IN THE CLAIMS:

The following listing of claims replaces all prior versions and listings of claims in the present application.

Listing of Claims:

1.-14. (Cancelled)

15. (Previously amended) A gas flow meter comprising:

a gas flow detection circuit for outputting a voltage signal representing a gas flow passing through a gas passage;

a conversion circuit for converting an output signal from said gas flow detection circuit into a digital signal; and

an adjusting circuit for adjusting the digital signal from said conversion circuit;

wherein a level of the digital signal inputted into the adjusting circuit is divided in two or more ranges and, an individual adjustment calculation formula is set for the digital signal at each of the divided ranges, and;

said adjusting circuit further comprising means for selecting the adjustment calculation formula according to the range of the digital signal inputted into the adjusting circuit and performing adjustment calculation by applying the selected formula to the inputted digital signal to produce an output value.

16. (Original) The gas flow meter according to claim 15, wherein the adjusting circuit is a digital adjusting circuit which digitally adjusts the signal representing the detected gas flow and outputs the adjusted signal.

17. (Original) The gas flow meter according to claim 15, wherein the adjusting circuit has input/output characteristics represented by each of the adjustment calculation formulas expressed as a first-degree function of $y = a \cdot x + b$ where x is an output value of the gas flow detection circuit, i.e., input value for the adjustment calculation, y is an output of the adjustment calculation, and a and b are adjustment coefficients.

18. (Original) The gas flow meter according to claim 16, wherein the adjusting circuit has input/output characteristics represented by each of the adjustment calculation formulas expressed as a first-degree function of $y = a \cdot x + b$ where x is an output value of the gas flow detection circuit, i.e., input value for the adjustment calculation, y is an output of the adjustment calculation, and a and b are adjustment coefficients.

19. (Original) The gas flow meter according to claim 15, further including:

a temperature sensor; and

a digital conversion circuit for converting an output of the temperature sensor into a digital value;

wherein said adjusting circuit also uses the output of the temperature sensor in performing the adjustment calculation.

20. (Original) The gas flow meter according to claim 16, further including:

a temperature sensor; and

a digital conversion circuit for converting an output of the temperature sensor into a digital value;

wherein said adjusting circuit also uses the output of the temperature sensor in performing the adjustment calculation.

21. (Original) The gas flow meter according to claim 17, further including:

a temperature sensor; and

a digital conversion circuit for converting an output of the temperature sensor into a digital value;

wherein said adjusting circuit also uses the output of the temperature sensor in performing the adjustment calculation.

22. (Original) The gas flow meter according to claim 18, further including:

a temperature sensor; and

a digital conversion circuit for converting an output of the temperature sensor into a digital value;

wherein said adjusting circuit also uses the output of the temperature sensor in performing the adjustment calculation.

23. (Original) The gas flow meter according to claim 19, wherein said adjusting circuit has an input/output characteristic expressed by

$$y = (a1 \cdot t + a2) \cdot x + (b1 \cdot t + b2)$$

where x is an output value of the gas flow detection circuit, t is an output value of the temperature sensor, and a1, a2, b1 and b2 are adjustment coefficients.

24. (Original) The gas flow meter according to claim 16, wherein said adjusting circuit has an input/output characteristic expressed by

$$y = (a1 \cdot t + a2) \cdot x + (b1 \cdot t + b2)$$

where x is an output value of the gas flow detection circuit, t is an output value of the temperature sensor, and a1, a2, b1 and b2 are adjustment coefficients.

25. (Original) The gas flow meter according to claim 17, wherein said adjusting circuit has an input/output characteristic expressed by

$$y = (a1 \cdot t + a2) \cdot x + (b1 \cdot t + b2)$$

where x is an output value of the gas flow detection circuit, t is an output value of the temperature sensor, and a1, a2, b1 and b2 are adjustment coefficients.

26. (Original) The gas flow meter according to claim 18, wherein said adjusting circuit has an input/output characteristic expressed by

$$y = (a1 \cdot t + a2) \cdot x + (b1 \cdot t + b2)$$

where x is an output value of the gas flow detection circuit, t is an output value of the temperature sensor, and a1, a2, b1 and b2 are adjustment coefficients.

27. (Previously amended) The gas flow meter according to claim 17, wherein said adjusting circuit includes a programmable storage device into which the adjustment coefficients a, a1, a2, b, b1 and b2 are written.

28. (Currently amended) The gas flow meter according to claim 17 or ~~13~~ 18, wherein the adjusting circuit includes an erasable and programmable storage device into which the adjustment coefficients a, a1, a2, b, b1 and b2 are written.

29. (Previously amended) The gas flow meter according to claim 18, wherein said adjusting circuit includes an erasable and programmable storage device into which the adjustment coefficients a, a1, a2, b, b1 and b2 are written.

30. (Previously amended) The gas flow meter according to claim 19, wherein said adjusting circuit includes an erasable and programmable storage device into which the adjustment coefficients a, a1, a2, b, b1 and b2 are written.

31. (Previously amended) The gas flow meter according to claim 20, wherein said adjusting circuit includes an erasable and programmable storage device into which the adjustment coefficients a, a1, a2, b, b1 and b2 are written.

32. (Previously amended) The gas flow meter according to claim 21, wherein said adjusting circuit includes an erasable and programmable storage device into which the adjustment coefficients a, a1, a2, b, b1 and b2 are written.

33. (Previously amended) The gas flow meter according to claim 22, wherein said adjusting circuit includes an erasable and programmable storage device into which the adjustment coefficients a, a1, a2, b, b1 and b2 are written.

34. (Previously amended) The gas flow meter according to claim 23, wherein said adjusting circuit includes an erasable and programmable storage device into which the adjustment coefficients a, a1, a2, b, b1 and b2 are written.

35. (Previously amended) The gas flow meter according to claim 24, wherein said adjusting circuit includes an erasable and programmable storage device into which the adjustment coefficients a, a1, a2, b, b1 and b2 are written.

36. (Previously amended) The gas flow meter according to claim 25, wherein said adjusting circuit includes an erasable and programmable storage device into which the adjustment coefficients a, a1, a2, b, b1 and b2 are written.

37. (Previously amended) The gas flow meter according to claim 26, wherein said adjusting circuit includes an erasable and programmable storage device into which the adjustment coefficients a, a1, a2, b, b1 and b2 are written.

38.-39. (Cancelled)

40. (Original) A gas flow meter comprising:
an adjusting circuit for adjusting a voltage output of a gas flow detection circuit which outputs a voltage signal representing a gas flow passing through a gas passage; and

a storage device for storing data for adjustment;

wherein said adjusting circuit retrieves as the output signal of the detected gas flow a ratiometric analog output, a non-ratiometric analog output and a digital output and selects one of these output signals by an output selection means provided in the adjusting circuit.

41. (Original) The gas flow meter according to claim 40, wherein said circuits for producing the ratiometric analog output, the non-ratiometric analog output and the digital output are formed on a same integrated circuit.

42.-43. (Cancelled)

44. (Original) A gas flow meter comprising:

a gas flow detection circuit for detecting a current flowing through a resistor installed in a gas passage and a generated voltage and outputting a voltage signal representing a gas flow passing through the gas passage;

a digital conversion circuit for converting the detected gas flow into a digital signal; and

a digital adjusting circuit for digitally adjusting the digital signal and outputting the adjusted digital signal;

wherein a voltage signal based on the digital signal adjusted by said digital adjusting circuit is output, and

the digital conversion circuit has means for selecting either a single-phase input or a differential input.

45. (Original) A gas flow meter comprising:

a gas flow detection circuit for detecting a current flowing through a resistor installed in a gas passage and a voltage generated across the resistor and outputting a voltage signal representing a gas flow passing through the gas passage;

a digital conversion circuit for converting the detected gas flow into a digital signal;

a digital adjusting circuit for digitally adjusting the digital signal and outputting the adjusted digital signal; and

an analog conversion circuit for receiving the adjusted digital signal and converting it into an analog signal;

wherein said analog conversion circuit is driven by a voltage based on an external reference voltage and a voltage follower circuit is arranged between a reference voltage terminal and a power supply terminal which drives said analog conversion circuit.

46. (Previously presented) The gas flow meter according to claim 1, wherein an integrated circuit substrate is provided and comprises said digital adjusting circuit and said regulator circuit formed thereon.